

## REMARKS

The Examiner is thanked for the indication that claims 30-35 are allowed.

Claims 1, 2, 4, 7, 30-35, and 36 remain pending in the instant application.

Claims 1, 2, 4, 7, and 36 presently stand rejected. Claims 1 and 36 are amended herein.

Entry of this amendment and reconsideration of the pending claims are respectfully requested.

### *Information Disclosure Statement*

Applicants submitted an Information Disclosure Statement and a Disclosure Citation Form PTO-1449 citing 14 references along with the Amendment and RCE mailed on November 25, 2003. Applicants kindly request that a copy of the 1449 form be returned with the Examiner's initials thereon indicating consideration of the cited art.

### *Claim Rejections – 35 U.S.C. § 103*

Claims 1, 2, 4, 7, and 36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,363,202 B1 to Goodfellow in view of U.S. Patent No. 4,984,894 to Kondo.

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. All words in a claim must be considered in judging the patentability of that claim against the prior art.” M.P.E.P. § 2143.03.

Independent claim 1 now recites, in pertinent part, “the first and second pluralities of silicon and polysilicon interfaces oriented substantially perpendicular to the semiconductor substrate.” Applicants respectfully submit that Goodfellow and Kondo fail to disclose, teach, or fairly suggest this element of claim 1.

The Examiner acknowledges that “Goodfellow lacks specific reference to first and second silicon materials disposed along the substrate.” Thus, the Examiner cites FIG. 2A of Kondo as disclosing “first and second plurality of silicon and polysilicon interfaces to reflect incident light.” However, Kondo clearly fails to teach or suggest layers 46, 44, and 42 as oriented substantially perpendicular to substrate 40.

Consequently, the combination of Goodfellow and Kondo fails to teach or suggest all elements of claim 1, as required under M.P.E.P. § 2143.03. Accordingly, Applicants request that the instant §103(a) rejections of claim 1 be withdrawn.

Dependent claim 36 recites, in pertinent part, “forming the optical waveguide with dielectric layers of a silicon-on-insulator wafer.” Applicants respectfully submit that the prior art of record fails to disclose, teach, or fairly suggest this element.

The Examiner cites col. 4, lines 9-17 of Goodfellow as teaching an optical waveguide formed with dielectric layers of a silicon-on-insulator wafer. *Office Action* mailed February 18, 2004, page 3, lines 19-21. In fact, the cited portion of Goodfellow discloses,

An alternative form of optical filter comprises multi-layer dielectric filter acting as **selectively reflective mirrors**. In practice a plurality of optical filters may be **arranged in series with each successive filter active in a different part of the spectrum**. Typically, light reflected by a first multi-layer dielectric filter will become incident on the next multi-layer dielectric filter in the series, whereas light passed by a first FBG filter will become incident on the next FBG filter in the series.

Goodfellow, col. 4, lines 9-17 (emphasis added). Thus, this portion of Goodfellow discloses a multi-layer dielectric filter acting as selectively reflective mirrors. However, a multi-layer dielectric filter does not teach or suggest forming an optical waveguide with dielectric layers of a silicon-on-insulator wafer. In fact, Goodfellow simply does not disclose a silicon-on-insulator wafer, much less forming a waveguide using layers of a silicon-on-insulator wafer. Rather, Goodfellow discloses that the multi-layer dielectric filter is to selectively reflect light, not to confine light within a waveguide.

Dependent claims 2, 4, 7, and 36 are nonobvious over the prior art of record for at least the same reasons as discussed above in connection with their respective independent claims, in addition to adding further limitations of their own. Accordingly, Applicants respectfully request that the instant § 103(a) rejections for claims 2, 4, 7, and 36 be withdrawn.

### CONCLUSION

In view of the foregoing amendments and remarks, Applicants believe the applicable rejections have been overcome and all claims remaining in the application are

presently in condition for allowance. Accordingly, favorable consideration and a Notice of Allowance are earnestly solicited. The Examiner is invited to telephone the undersigned representative if the Examiner believes that an interview might be useful for any reason.


### CHARGE DEPOSIT ACCOUNT

It is not believed that extensions of time are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a). Any fees required therefore are hereby authorized to be charged to Deposit Account No. 02-2666. Please credit any overpayment to the same deposit account.

Respectfully submitted,

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP

Date: <sup>CR</sup>  
~~March~~ April 5, 2004

  
Cory G. Claassen  
Reg. No. 50,296  
Phone: (206) 292-8600

### FIRST CLASS CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

on April 5, 2004  
Date of Deposit

  
Yuko Tanaka

April 5, 2004  
Date